

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method for use in controlling a device or process, comprising the steps of:
5 attaching a detector (20), adapted to detect mechanical vibrations, to a person's head (22);
 detecting mechanical vibrations elicited by sudden contact of upper teeth (24) and lower teeth (26); and
 using the mechanical vibrations to trigger a signal to control operation of a device or
10 process (36, 80, 82, 84, 86, 88, 90).
2. The method as defined in Claim 1, the detector being in communication with a controller (40) that controls the device or process (36, 80, 82, 84, 86, 88, 90).
- 15 3. The method as defined in Claim 2, detector including a transmitter (56) to transmit data from the detector (20) to a receiver (62) in the controller (40) .
4. The method as defined in Claim 1, the detector (20) being one of an accelerometer or microphone.
- 20 5. The method as defined in Claim 1, the detector (20) being positioned over a bony mastoid process (28) behind the person's ear (30).
6. The method as defined in Claim 1, the detector (20) overlying the person's
25 temperomandibular (jaw) joint (32).
7. The method as defined in Claim 2, the controller (40) causing a body part (42/44) of the person wearing the detector (20) to move.

8. The method as defined in Claim 7, the controller (40) causing body part (42/44) to move by doing one of stimulating muscles (38), stimulating nerves (38), controlling an active orthosis or controlling a prosthesis.
- 5 9. The method as defined in Claim 3, the detector (20) communicating by one of acoustic or electromagnetic means.
- 10 10. The method as defined in Claim 2, the controller (40) for the device or process (80, 82, 84, 86, 88, 90) being physically separated from the person wearing the detector (20).
- 15 11. The method as defined in Claim 1, any one of a plurality of devices (80, 82, 84, 86, 88, 90) being triggered according to the temporal pattern or the intensity of the detected vibrations.
- 20 12. The method as defined in Claim 1, the device controlled being an electronic device (82, 84, 86).
13. The method as defined in Claim 12, the device being a computer (82).
- 25 14. The method as defined in Claim 1, good contact between the detector (20) and the head (22) is effected by securing the detector by means of an elastic headband (110).
15. The method as defined in Claim 1, good contact between the detector (20) and the head (22) is effected by a springy headpiece (100) of the type used in earphones.
16. The method as defined in Claim 1, good contact between the detector (20) and the head (22) is effected by glasses (120) with springy arms.

17. The method as defined in claim 3, the detector (20) is implanted under the person's skin (130).

18. The method as defined in claim 1, the device is a cuff (36) with built in electrodes (38)
5 that stimulate muscles in the person's hand (42/44), the cuff (36) having a controller (40) which generates pulses which are transmitted to the muscles via electrodes (38).

19. The method as defined in Claim 2, the controller (40) including a power source (60), a receiver (62), an amplifier (64) and an output signal generator (68).

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20. The method as defined in Claim 19, the controller (40) having a filter (65) and a logic circuit (66).

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21. The method as defined in Claim 1, the detector (20) including a power source (50), a vibration sensor (52), an amplifier (54) and a radio transmitter (56).

22. The method as defined in Claim 1, the detector (20) being a passive transponder.

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23. The method as defined in Claim 1, the detector (20) being secured to the person's head (22) by one of an adhesive or adhesive tape.

24. An apparatus adapted to detect mechanical vibrations in a person's head (22) elicited by sudden contact of upper teeth (24) and lower teeth (26) and use such mechanical vibrations to control a device or process in accordance with the teachings of Claim 1.